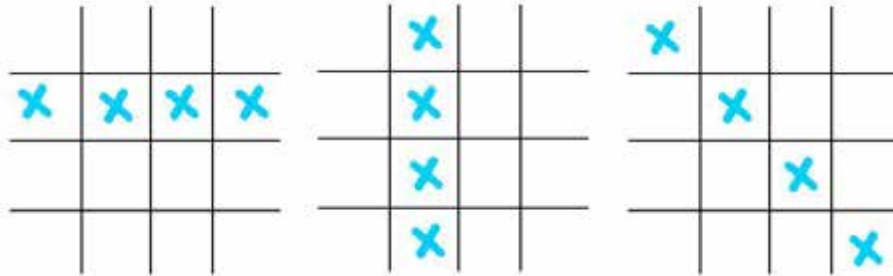


Fractions 4-in-a-Row

Object of the Game

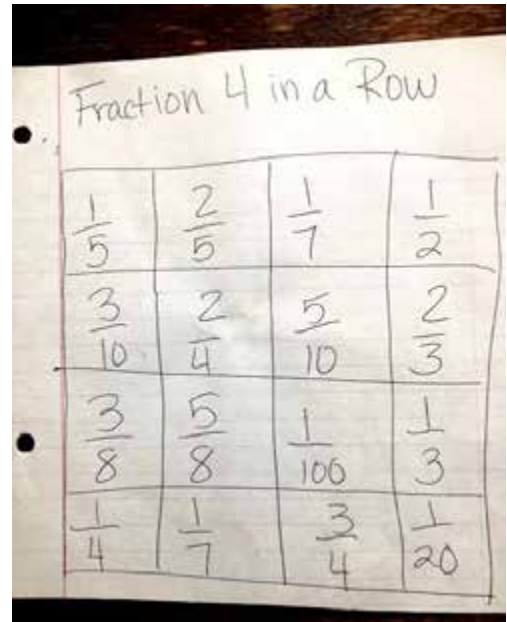
Be the first player to claim 4 spaces in a row, column, or on the diagonal to win the game.



Three ways to win!

Materials

- A set of Fraction Description Cards
[Print the Fraction Description Cards](#) or make your own by writing the fraction descriptions (see below) on small pieces of paper.
- 2 Fractions 4-in-a-Row game boards (1 for each player) [Print the Fractions 4-in-a-Row game board](#) or use paper and pencil to make your own.
- 20–30 game markers (10–15 for each player). These can be dried beans, buttons, coins, paper scraps, building blocks, etc.
- Pencil or pen



Fraction Descriptions

1 season of the year

2 dimes out of a dollar

1 finger on 1 hand

Weekend days out of a week

Even numbers from 1 to 10

1 egg in a dozen

1 shoe of a pair

1 penny out of a dollar

1 foot of a yard

3 pins knocked down in a bowling frame

1 face of a Rubik's Cube

1 nickel out of a dollar

2 senses

3 tires on a car

3 legs on a spider

5 legs on an octopus

1 day of the week

2 quarters out of a dollar

3 innings of a baseball game

2 periods in a hockey game

Skills

This game helps us

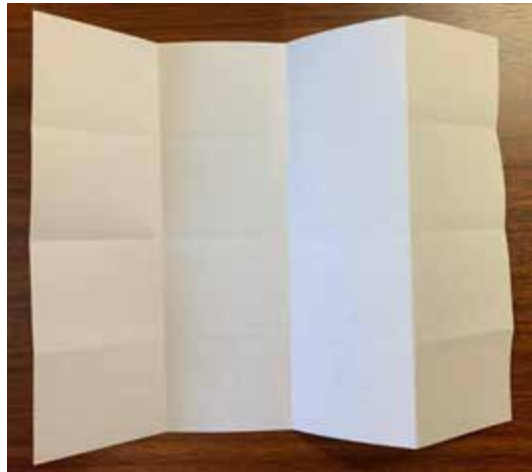
- Understand the meaning of the numerator and denominator in a fraction
- Practice multiplying a whole number by a fraction

How to Play

1. Each player prepares a Fraction 4-in-a-Row game board by writing 16 of the 20 fractions listed below in the squares in any order they choose. (Use each fraction only once.)

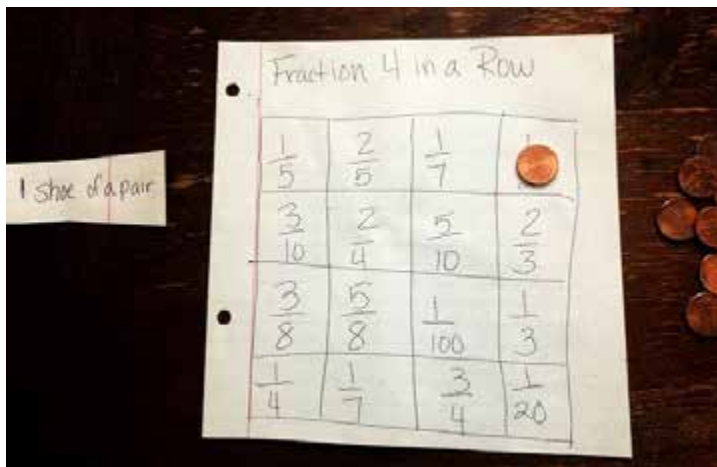
Hint: You can quickly make a 4 by 4 grid by folding a piece of paper in half twice horizontally, then twice vertically.

FRACTIONS			
$\frac{1}{4}$	$\frac{1}{6}$	$\frac{3}{9}$	$\frac{1}{20}$
$\frac{1}{5}$	$\frac{2}{5}$	$\frac{2}{10}$	$\frac{3}{4}$
$\frac{5}{10}$	$\frac{3}{8}$	$\frac{2}{7}$	$\frac{5}{8}$
$\frac{1}{2}$	$\frac{3}{10}$	$\frac{1}{12}$	$\frac{2}{4}$
$\frac{1}{3}$	$\frac{1}{7}$	$\frac{1}{100}$	$\frac{2}{3}$



2. Mix up the Fraction Description Cards and place them facedown in a stack. Decide who goes first.

- Player 1 draws a Fraction Description Card and places it faceup near the stack. Each player puts a game marker on the fraction on their own game board that matches the description on the card.
 - If players disagree on the fraction, they each have to explain their reasoning. Sometimes players choose equivalent fractions and both players are correct.
 - If the Fraction Description Card describes something you don't know yet, ask a grownup or try finding the answer yourself.



The Fraction Description card says "1 shoe of a pair" so players marked " $\frac{1}{2}$ " on their game boards.

- Continue the game until a player claims 4 spaces in a row horizontally, vertically, or diagonally.



Player 1: I got four in a row! I win!

Tips for Families

- Before playing the game, go through the Fraction Description Cards and discuss the fraction for each card.
- Help children understand that one way to use fractions is to show a part out of a whole. For example: 1 inning of a baseball game can be represented by $\frac{1}{9}$, because it is 1 out of 9 innings.

Change It Up

Making even small changes to a game can invite new ways of thinking about the math. Try making one of the changes below.

- Change the requirement from claiming 4 in a row to claiming all of the outer spaces to make a picture frame, or claiming all of the spaces on the game board.
- Think of your own descriptions and fractions. Make new cards for your ideas and add them to the game.

FRACTION DESCRIPTION CARDS



1 season of the year	2 dimes out of a dollar
1 finger on 1 hand	Weekend days out of a week
Even numbers from 1 to 10	1 egg in a dozen
1 shoe of a pair	1 penny out of a dollar
1 foot of a yard	3 pins knocked down in a bowling frame
1 face of a Rubik's Cube	1 nickel out of a dollar
2 senses	3 tires on a car
3 legs on a spider	5 legs on an octopus
1 day of the week	2 quarters out of a dollar
3 innings of a baseball game	2 periods in a hockey game

FRACTIONS 4-IN-A-ROW

FRACTIONS 4-IN-A-ROW
